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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 04/06/2004

James J. Murphy, Esq  
WINSTEAD, SECHREST & MINICK P.C  
P.O. Box 50784  
400 North Ervay Street  
Dallas, TX 75201

EXAMINER

VAUGHN JR, WILLIAM C

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 04/06/2004

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,573	07/13/2000	Rajugopal R. Gubbi	003498.P051	4952

TITLE OF INVENTION: QUALITY OF SERVICE EXTENSIONS FOR MULTIMEDIA APPLICATIONS IN WIRELESS COMPUTER NETWORKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	07/06/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.  
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

Complete and send this form, together with applicable fee(s), to: **Mail**

**Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
(703) 746-4000**

or **Fax**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

7590

04/06/2004

James J. Murphy, Esq  
WINSTEAD, SECHREST & MINICK P.C  
P.O. Box 50784  
400 North Ervay Street  
Dallas, TX 75201

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/615,573

07/13/2000

Rajugopal R. Gubbi

003498.P051

4952

TITLE OF INVENTION: QUALITY OF SERVICE EXTENSIONS FOR MULTIMEDIA APPLICATIONS IN WIRELESS COMPUTER NETWORKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1330	\$0	\$1330	07/06/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
VAUGHN JR, WILLIAM C	2143	709-225000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1	_____
2	_____
3	_____

### 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent); ☐ individual ☐ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

- ☐ Issue Fee
- ☐ Publication Fee
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

- ☐ A check in the amount of the fee(s) is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

(Date)

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.**

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EXAMINER

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## **Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)** (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 694 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 694 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

Notice of Allowability  
**FILE COPY**

Application No.

09/615,573

Examiner

William C. Vaughn, Jr.

Applicant(s)

GUBBI, RAJUGOPAL R.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 21 January 2004.
2. ☒ The allowed claim(s) is/are 5-11. Renumbered 1-7.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date Paper 5.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 9.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

William C. Vaughn, Jr.  
Patent Examiner  
AU 2143  
William C. Vaughn

**Examiner-Initiated Interview Summary**

Application No.

09/615,573

Applicant(s)

GUBBI, RAJUGOPAL R.

Examiner

William C. Vaughn, Jr.

Art Unit

2143

**All Participants:**(1) William C. Vaughn, Jr., Examiner.(2) James J. Murphy, Reg. No. 34,503.**Status of Application:** \_\_\_\_\_

(3) \_\_\_\_\_

(4) \_\_\_\_\_

**Date of Interview:** 1 April 2004**Time:** approx. 11:00am**Type of Interview:**☒ Telephonic☐ Video Conference☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)**Exhibit Shown or Demonstrated:** ☐ Yes ☐ No

If Yes, provide a brief description:

**Part I.****Rejection(s) discussed:**

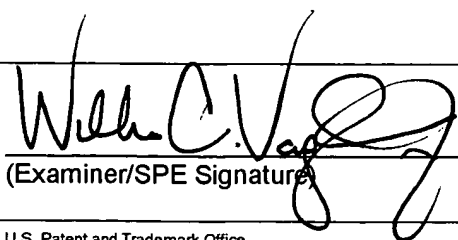
none

**Claims discussed:**

2-13

**Prior art documents discussed:**

none

**Part II.****SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:***See Continuation Sheet***Part III.**☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

(Examiner/SPE Signature)

(Applicant/Applicant's Representative Signature – if appropriate)

Continuation of Substance of Interview including description of the general nature of what was discussed: The Examiner contacted Applicant's representative in regards to 09/615,573. The Examiner requested further clarification in regards to the "interface" of claims 2-13. The Examiner also indicated that if Applicant were to further specify the details of the different fields and subfields of the media access control frames as taught within the enabling portions of Applicant's specification (pages 33, 34 and 37) of the media access control frame (i.e., capability field, multimedia control field, frame position sub-field, stream index sub-field, basic service set session identification sub-field, pad byte sub-field, time stamp sub-field, bits, bytes) as well as the cancellation of claims 2-4, 12 and 13 without prejudice in order to advance prosecution of the case. This would place the application into condition for allowance. With regards to the "interface", Applicant's representative indicated that the enabling portions regarding this particular limitation is disclosed within the specification on pages 28-29 and 56. Applicant's representative agreed with the suggestion. Applicant's representative gave authorization for the changes to be done by examiner's amendment.

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**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James J. Murphy, Reg. No. 34,503 on 01 April 2004.

**IN THE SPECIFICATION**

Please amend the specification as follows on page 3, line 17:

--In co-pending application, Serial No. 09/151,579, now abandoned, --

**IN THE CLAIMS**

Please cancel claims 2, 3, 4, 12 and 13 without prejudice or disclaimer.

Please amend claims 10 and 11 as follows:

10. {TWICE AMENDED} An interface between a wireless network component and the a wireless medium, the interface communicating multimedia data streams as defined by a networking protocol that includes definitions of quality of service enhancements to provide reliable communications of said multimedia data streams, the quality of service enhancements comprising a capability information field and a multimedia control field within a media access control frame and including a frame position sub-field, pad byte sub-field, a stream index sub-field, a basic service set identification sub-field and a time stamp sub-field[.]; and

Amend B  
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wherein the capability information field consists of a multimedia capability bit to indicate whether a device is multimedia enhanced, a proxy point coordinator bit to indicate whether a device can provide proxy services, a alternate point coordinator capability bit to indicate whether a device can be an alternated point coordinator, and a channel sharing bit to indicate whether basic service set is sharing a channel with other overlapping basic service sets; and

wherein the multimedia control field consists of 32 bits; wherein the 32 bits of the multimedia control field consists of five sub-fields; and the five sub-fields consist of:

a first 2-bit sub-field indicating a frame position within a series of frames,

a second 2-bit sub-field indicating a number of bytes padded in a frame to make an entire frame 4-byte aligned,

a third 4-bit basis service set identification sub-field indicating when overlapping subnets need to operate in a same channel,

a fourth 8-bit sub-field indicating an index number uniquely identifying the multimedia data streams, in which all values of the index are dynamically assigned and used,

a fifth 16-bit time stamp sub-field used to provide support for synchronization of any two streams originating from a device.

3  
11. {TWICE AMENDED} A system comprising an interface wherein the interface communicates multimedia data streams as defined by a networking protocol that includes definitions of quality of service enhancements to provide reliable communications of said multimedia data streams, the quality of service enhancements including a capability information field and a multimedia control field within a multimedia control frame[.] and including a frame



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position sub-field, pad byte sub-field, a stream index sub-field, a basic service set identification sub-field and a time stamp sub-field,

wherein the capability information field consists of a multimedia capability bit to indicate whether a device is multimedia enhanced, a proxy point coordinator bit to indicate whether a device can provide proxy services, a alternate point coordinator capability bit to indicate whether a device can be an alternated point coordinator, and a channel sharing bit to indicate whether basic service set is sharing a channel with other overlapping basic service sets; and

wherein the multimedia control field consists of 32 bits; wherein the 32 bits of the multimedia control field consists of five sub-fields; and the five sub-fields consist of:

a first 2-bit sub-field indicating a frame position within a series of frames,

a second 2-bit sub-field indicating a number of bytes padded in a frame to make an entire frame 4-byte aligned,

a third 4-bit basis service set identification sub-field indicating when overlapping subnets need to operate in a same channel,

a fourth 8-bit sub-field indicating an index number uniquely identifying the multimedia data streams, in which all values of the index are dynamically assigned and used,

a fifth 16-bit time stamp sub-field used to provide support for synchronization of any two streams originating from a device.

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### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance: Interpreted in view of the specification, as Applicant's invention shows novelty in the use of a quality of service

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enhancements comprising a capability information field and a multimedia control field within a media access control frame and including a frame position sub-field, pad byte sub-field, a stream index sub-field, a basic service set identification sub-field and a time stamp sub-field; and wherein the capability information field consists of a multimedia capability bit to indicate whether a device is multimedia enhanced, a proxy point coordinator bit to indicate whether a device can provide proxy services, a alternate point coordinator capability bit to indicate whether a device can be an alternated point coordinator, and a channel sharing bit to indicate whether basic service set is sharing a channel with other overlapping basic service sets; and wherein the multimedia control field consists of 32 bits; wherein the 32 bits of the multimedia control field consists of five sub-fields; and the five sub-fields consist of: a first 2-bit sub-field indicating a frame position within a series of frames, a second 2-bit sub-field indicating a number of bytes padded in a frame to make an entire frame 4-byte aligned, a third 4-bit basis service set identification sub-field indicating when overlapping subnets need to operate in a same channel, a fourth 8-bit sub-field indicating an index number uniquely identifying the multimedia data streams, in which all values of the index are dynamically assigned and used, a fifth 16-bit time stamp sub-field used to provide support for synchronization of any two streams originating from a device, as also argued by Applicant, (see paper 7, pages 6-9 as well as the enabling portions of Applicant's specification see pages 33-36 and 56).

3. Because the prior art of record does not teach nor suggest in detail as argued by the Applicant (see paper 7, pages 6-9 as well as Applicant's enabling portions of the specification), capability information field, multimedia control field, frame position sub-field, a stream index sub-field, a basic service set session identification sub-field, and a timestamp sub-field as well as

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other details regarding the bit structure and requirements of the fields and sub-fields. So as indicated by the above statements, Applicant's arguments have been considered persuasive, in light of the claim limitations as well as the enabling portions of the specification.

4. The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claims as well as for the further limitations set forth.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. **Claims 5-11** are allowable.

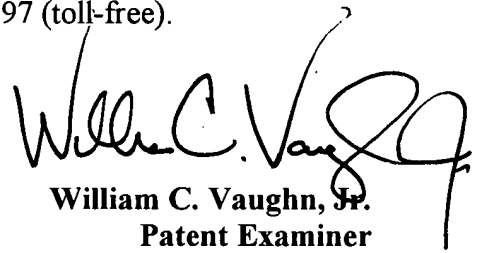
### *Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (703) 306-9129. The examiner can normally be reached on 8:00-6:00, 1st and 2nd Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "William C. Vaughn, Jr.", with a stylized flourish at the end.

**William C. Vaughn, Jr.**  
**Patent Examiner**  
**Art Unit 2143**  
**02 April 2004**